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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

APPIAH, CHARLES NANA

ART UNIT

PAPER NUMBER

2682

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

12

Office Action Summary

Application No.

09/306,084

Applicant(s)

FEDER ET AL.

nk

Examiner

Charles Appiah

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 1999.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by **Sakai (JP 410013338)**.

Regarding claim 1, Sakai discloses a method of transmitting over a wireless link (see title) the method comprising; adjusting the transmit power of a wireless transmitter in relation to a number N of expected ACKs for radio transmission over the wireless link (reducing transmitted power by predetermined amount when the acknowledge signal of predetermined frequency is received and raising transmitted power by predetermined amount when the non-acknowledge signal of predetermined frequency is received, with the non-acknowledge signal constituting the expected ACKs, see abstract).

Regarding claim 2, Sakai's teaching of when the acknowledge signal of predetermined frequency is received, the transmitted power is reduced by a predetermined amount and when the non-acknowledge signal of predetermined frequency is received, the transmitted power is raised by a predetermined amount (see abstract) reads on decreasing the transmit power if the number of ACKs lost/expected number of ACKs is below a second threshold and increasing the transmit power if the number of ACKs lost/expected number of ACKs is above a first threshold, since the

Art Unit: 2682

non-acknowledge signal reception meets the ACKs lost/expected number of ACKs being above a first threshold while the acknowledge signal reception meets the ACKs lost/expected number of ACKs being below a second threshold.

Regarding claims 4 and 5 Sakai's teaching as illustrated on page 7, figure B, further discloses providing a base station transmitting acknowledgements of radio packets transmitted by the wireless transmitter over the wireless link to the base station as well as providing a wireless unit (communication apparatus 10, drawing figure on page 4) transmitting acknowledgements of radio packets transmitted by the wireless transmitter over the wireless link to the wireless unit.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by **Ono et al. (JP 362285532)**.

Regarding claim 1, Ono discloses a communication system in which a central supervisory station sends a packet Pc stored temporarily in a store and forward exchange so as to increase the effective radiated power from a communication satellite when a reception acknowledge signal is not received for a proscribed time for packet sent from a first earth station to a second earth station (see abstract, constitution), which anticipates adjusting the transmit power of a wireless transmitter in relation to the number of expected ACKs for radio transmission over the wireless link in a method of transmitting over a wireless link.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2682

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Sakai** as applied to claim 1 above, and further in view of **Honkasalo et al. (5,995,496)**.

Regarding claim 3, Sakai fails to explicitly disclose determining an initial transmit power for the wireless transmitter based on a measurement of a signal received over the wireless link.

Honkasalo discloses a system controlling transmission power in data packet transfer (title) that include determining of a default transmission power value which is calculated based on feedback signal received which involves measuring results expressing the quality of the received signal (see col. 3, lines 24-61, col. 4, lines 58-63).

It would therefore have been obvious to one of ordinary skill in the art to provide the above teaching of Honkasalo by providing a closed loop power control method with the system of Sakai for the benefit of dynamically controlling power based on changing propagation conditions in the wireless communication system.

Allowable Subject Matter

6. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2682

7. The following is a statement of reasons for the indication of allowable subject matter: With respect to claim 6, Sakai discloses altering a transmitted electrical power based on whether an acknowledge signal or non-acknowledge signal is received by a radio communication apparatus. Sakai fails to teach providing a register of length N, filling the register with ACK bits, inserting into the register a receive ACK bit if an ACK bit was received within a time interval and inserting into the register a no ACK bit if an ACK bit was not received within the time interval:

Claim 7 is allowable based on its dependency on claim 6.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Flammer et al. (5,465,398) discloses an automatic power level control of packet communication links.

Mochizuki (EP 0 917 304) discloses a transmission power control method, which is dependent on the reception or non-reception of an ACK signal.

Whitehead (6,157,616) discloses an adaptive method for packet transmission over wireless networks.

Uebayashi et al. (6,310,868) discloses a method for signal transmission in a CDMA communication system including a forward link signal ACK signal being involved in a closed loop power transmission control.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Appiah whose telephone number is 703 305-4772. The examiner can normally be reached on M-F 7:30AM-5:00PM.

Art Unit: 2682

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703 305-6739. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 308-6296 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-4750.

Charles Appiah
May 28, 2002



CHARLES APPIAH
PATENT EXAMINER